

# IB IL 24 AI 2/SF-230 - Inline terminal



2740818

<https://www.phoenixcontact.com/us/products/2740818>

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Inline analog input terminal, without accessories, 2 inputs, 0 - 20 mA, 4 - 20 mA,  $\pm 20$  mA, 0 - 10 V,  $\pm 10$  V, 3 dB cut-off frequency at 230 Hz, 2-conductor connection technology



The figure shows version IB IL AI 2/SF

## Product description

The terminal is designed for use within an Inline station. It is used to acquire analog voltage and current signals.

## Commercial data

Item number	2740818
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DRI141
GTIN	4017918574789
Weight per piece (including packing)	67.2 g
Weight per piece (excluding packing)	52.89 g
Customs tariff number	85389091
Country of origin	DE

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## Technical data

### Product properties

Type	modular
	Inline

### System properties

#### Module

ID code (dec.)	127
ID code (hex)	7F
Length code (hex)	02
Length code (dec)	02
Input address area	4 Byte
Output address area	4 Byte
Register length	32 bit
Required parameter data	6 Byte

### Electrical properties

#### Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 60 mA
	typ. 45 mA

#### Potentials: Supply of analog modules ( $U_{ANA}$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 18 mA
	typ. 13 mA

#### Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply, incoming remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply, outgoing remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V supply (bus logic), 24 V supply $U_{ANA}$ / I/O	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V supply (bus logic), 24 V supply $U_{ANA}$ / functional ground	500 V AC, 50 Hz, 1 min
Test voltage: I/O/functional ground	500 V AC, 50 Hz, 1 min

### Input data

#### Analog: General

Input name	Analog inputs
Number of inputs	max. 2 (single ended)
A/D conversion time	120 $\mu$ s (per channel)

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Connection technology	2-conductor (shielded)
Current input signal	0 mA ... 20 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Voltage input signal	0 V ... 10 V
	-10 V ... 10 V
Input resistance of voltage input	< 220 kΩ
A/D converter resolution	16 bit
Data formats	IB IL, IB ST, IB RT, standardized representation
Limit frequency (3 dB)	40 Hz
	230 Hz
Measured value representation	16 bits (15 bits + sign bit)

## Analog: Voltage inputs

Number of inputs	2 (Single-ended voltage inputs)
Voltage input signal	0 V ... 10 V
	-10 V ... 10 V
Input resistance of voltage input	220 kΩ
A/D converter resolution	15 bit
Measuring principle	Successive approximation
Measured value resolution	16 bits (15 bits + sign bit)
Measured value representation	16 bit two's complement

## Analog: Current inputs

Number of inputs	2 (single-ended current inputs)
Current input signal	0 mA ... 40 mA
	4 mA ... 20 mA
	-20 mA ... 20 mA
Input resistance current input	50 Ω 0.02 %
Limit frequency (3 dB)	15 Hz (40 Hz)

## Connection data

### Inline connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section, flexible	0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	28 ... 16

## Interfaces

### Inline local bus

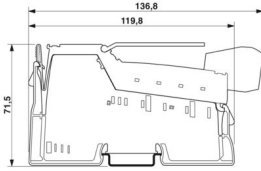
No. of channels	2
Connection method	Inline data jumper
Transmission speed	500 kbps
Transmission physics	Copper

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## Dimensions

Dimensional drawing	
Width	12.2 mm
Height	136.8 mm
Depth	71.5 mm

## Material specifications

Color	green
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## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (according to DIN EN 61131-2)
Permissible humidity (storage/transport)	10 % ... 95 % (according to DIN EN 61131-2)

## Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

Mounting type	DIN rail mounting
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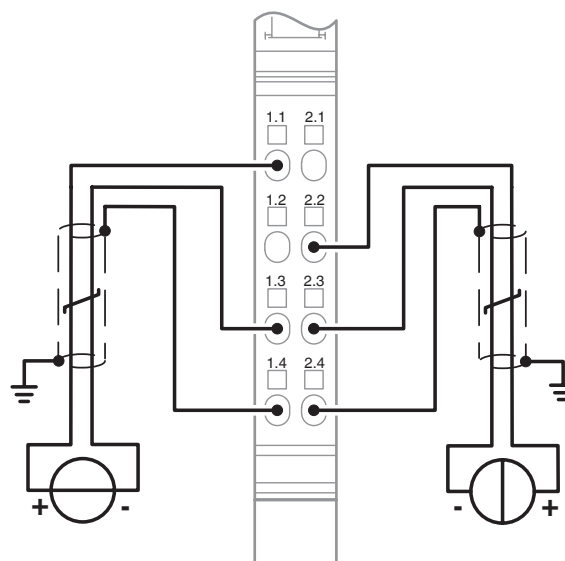
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## Drawings

Dimensional drawing



Connection diagram





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## Environmental product compliance

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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